

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0012] with the following amended paragraph:

[0012]



(in formula (III), R⁰ represents a hydrogen atom or a C1 to C4 lower alkyl group); Q₁ represents a linear or branched lower alkyl group, an optionally-condensed C3 to C9 cycloalkyl group, a phenyl group, a naphthyl group, or an optionally-condensed 3- to 8-membered heterocyclic group (the hetero ring may have from 1 to 3 hetero atoms selected from a group consisting of an oxygen atom, a sulfur atom and a nitrogen atom), which is unsubstituted or has a substituent selected from a group consisting of a cyano group, a hydroxyl group, a lower alkyl group (the lower alkyl group may be further substituted with a hydroxyl group, a halogen atom, an amino group, an aryl group or a heteroaryl group), a cycloalkyl group, a lower alkoxy group (the lower alkoxy group may be further substituted with a halogen atom), a halogen atom, a mono-lower alkylcarbamoyl group, a di-lower alkylcarbamoyl group, a carbamoyl group, a cycloalkyliminocarbamoyl group, a lactam ring, a trifluoromethyl group, a mono-lower alkylamino group, a di-lower alkylamino group and an alkanoyl group) (but excepting the following:

- 1) a case where Y is an alkoxycarbonyl group, or
- 2) a case where Y of formula (II) is a group of the following formula (II-1):



(in formula (II-1), L₁ and Q₁ have the same meaning as L₁ and Q₁ in formula (II));

R¹ and R² independently represent a hydrogen atom, a halogen atom, a linear or branched lower alkyl group, a lower alkoxy group, or an acetyl group substituted with 2 or 3 fluorine atoms] (but excepting 1-[4-(piperidin-1-yl)piperidin-1-yl]-4-(7-carbamoyl-1H-benzimidazol-2-yl)benzene, 1-[4-(piperidin-1-yl)piperidin-1-yl]-4-(5-cyano-6-oxo-pyridin-2-yl)benzene and 1-[4-(pyrrolidin-1-yl)piperidin-1-yl]-4-(5-cyano-6-oxo-pyridin-2-yl)benzene) or its pharmaceutically-acceptable salt (~~claim 1~~).

Please replace paragraph [0013] with the following amended paragraph:

[0013]

The invention also relates to the compound or its pharmaceutically-acceptable salt of ~~claim 1~~ wherein, in formula (I), R^1 and R^2 are hydrogen atoms, m in X^3 is an integer of from 1 to 3, and s is 0 ~~(claim 2)~~.

Please replace paragraph [0014] with the following amended paragraph:

[0014]

The invention further relates to the compound or its pharmaceutically-acceptable salt of ~~claim 1 or 2~~, wherein, in formula (II), Y is a group of a general formula (IV):

Please replace paragraph [0016] with the following amended paragraph:

[0016]



[in formula (V), R^5 represents a hydrogen atom, a lower alkyl group, a C3 to C8 cycloalkyl group, an aralkyl group, or a heteroaryl group; n indicates 0 or an integer of from 1 to 4] ~~(claim 3)~~; or relates to the compound or its pharmaceutically-acceptable salt of ~~claim 1 or 2~~, wherein, in formula (II), Y is a group of a general formula (IV):

Please replace paragraph [0017] with the following amended paragraph:

[0017]



in formula (IV), R³ is a hydrogen atom, or a lower alkyl group, and R⁴ is a group of a general formula (VI):



[in formula (VI), A represents an aryl group, a heteroaryl group, a condensed bicyclic group of a C4 to C7 cycloalkyl group and an aryl group, or a condensed bicyclic group of a C4 to C7 cycloalkyl group and a heteroaryl group; q indicates 0 or an integer of from 1 to 3] ~~(claim 4); or relates to the compound or its pharmaceutically-acceptable salt of claim 1 or 2, wherein, in formula (II), Y is a group of a general formula (IV):~~

Please replace paragraph [0018] with the following amended paragraph:

[0018]



in formula (IV), R³ and R⁴ form a nitrogen-containing heterocyclic group as integrated with the nitrogen atom to which they bond ~~(claim 5).~~

Please replace paragraph [0019] with the following amended paragraph:

[0019]

The invention also relates to the compound or its pharmaceutically-acceptable salt of claim 5, wherein Y is a group of a general formula (IV) wherein the nitrogen-containing heterocyclic group is a monocyclic group such as a piperidinyl group, a pyrrolidinyl group, an azetidinyl group, a homopiperidinyl group or a heptamethyleneiminyl group, or a bicyclic group of such a monocyclic group and a C4 to C7 cycloalkyl group, a phenyl group or a pyridyl group (claim 6); or relates to the compound or its pharmaceutically-acceptable salt of claims 3 to 6, wherein X¹ and X² are both CH₂, or one of them is a nitrogen atom (claim 7); or relates to the compound or its pharmaceutically-acceptable salt of claim 1 or 2, wherein, in formula (II), Y is an aryl group or a 5-membered or 6-membered heteroaryl group (the heteroaryl group has, in the ring thereof, from 1 to 3 hetero atoms selected from a group consisting of a nitrogen atom, a sulfur atom and an oxygen atom), which is unsubstituted or substituted with 1 or 2 substituents selected from a group consisting of a lower alkyl group, a lower alkoxy group, a hydroxyl group and a halogen atom (claim 8); or relates to the compound or its pharmaceutically-acceptable salt of claim 8, wherein X¹ and X² are both nitrogen atoms (claim 9); or relates to the compound or its pharmaceutically-acceptable salt of claim 1, wherein the piperidine derivative compound of formula (I) is any of the following (claim 10):

- N-methyl-N-(1-methylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (1),
- N-(1-methylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (2),
- N-methyl-N-(1-cyclobutylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (3),
- N-methyl-N-(1-cyclopentylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (4),
- N-methyl-N-(1-cyclohexylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (5),
- N-methyl-N-(1-cyclohexylmethylpiperidin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (6),
- N-methyl-N-[(3R)-1-cyclopentylpyrrolidin-3-yl]-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (7),
- N-methyl-N-[(3S)-1-cyclopentylpyrrolidin-3-yl]-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (8),
- N-methyl-N-[(3R)-1-benzylpyrrolidin-3-yl]-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (9),
- N-methyl-N-[(3R)-1-benzylpyrrolidin-3-yl]-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (10),
- N-(pyridin-4-yl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide trifluoroacetate (11),
- 2-{4-(piperidin-1-yl)piperidin-1-yl}benzoyl-1,2,3,4-tetrahydroisoquinoline (12),
- 1-{4-(piperidin-1-yl)piperidin-1-yl}benzoyl-1,2,3,4-tetrahydroquinoline (13),
- 1-{4-(piperidin-1-yl)piperidin-1-yl}benzoyl-4-phenylpiperazine (14),

N-methyl-N-[1-(pyrimidin-2-yl)piperidin-4-yl]-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (15),
N-methyl-N-(thiophen-2-yl)methyl-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (16),
N-methyl-N-phenethyl-4-[4-(piperidin-1-yl)piperidin-1-yl]benzamide (17),
1-{4-(piperidin-1-yl)piperidin-1-yl}benzoyl-3-(3,4-difluorophenyl)pyrrolidine (18),
4-{4-(piperidin-1-yl)piperidin-1-yl}benzoylpiperidin-1-yl (19),
N-methyl-N-(1-methylpiperidin-4-yl)-4-[4-(pyrrolidin-1-yl)piperidin-1-yl]benzamide (20),
N-methyl-N-(1-methylpiperidin-4-yl)-4-[4-(azetidin-1-yl)piperidin-1-yl]benzamide (21),
N-methyl-N-(1-methylpiperidin-4-yl)-5-[4-(piperidin-1-yl)piperidin-1-yl]pyridine-2-carboxamide (22),
N-methyl-N-(1-methylpiperidin-4-yl)-4-[4-(4,4-difluoropiperidin-1-yl)piperidin-1-yl]benzamide (23),
2-[(4-(piperidin-1-yl)piperidin-1-yl)-5-(4-cyanophenyl)pyrimidine (24),
2-[(4-(piperidin-1-yl)piperidin-1-yl)-5-(3-pyridyl)pyrimidine (25),
2-[4-(piperidin-1-yl)piperidin-1-yl]-5-(3-trifluoromethylphenyl)pyrimidine (26),
2-[4-(piperidin-1-yl)piperidin-1-yl]-5-(3,5-dichlorophenyl)pyrimidine (27),
2-[4-(piperidin-1-yl)piperidin-1-yl]-5-(2-naphthyl)pyrimidine (28),
2-[4-(piperidin-1-yl)piperidin-1-yl]-5-[4-(pyrrolidin-1-ylcarbonyl)phenyl]pyrimidine (29),
1-[4-(piperidin-1-yl)piperidin-1-yl]-4-(3-pyridyl)benzene (30),
1-(piperidin-1-ylmethyl)-4-[4-(piperidin-1-yl)piperidin-1-yl]benzene (31).

Please replace paragraph [0020] with the following amended paragraph:

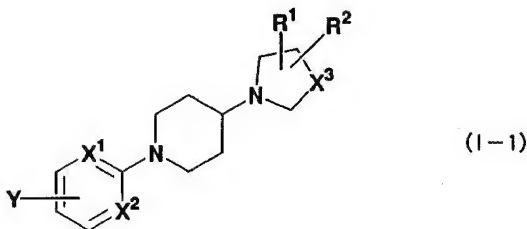
[0020]

The invention also relates to a histamine-H3 antagonist or inverse-agonist containing, as the active ingredient thereof, a compound or its pharmaceutically-acceptable salt of formula (I) ~~any of claims 1 to 10 (claim 11)~~; or relates to a preventive or remedy containing, as the active ingredient thereof, a compound or its pharmaceutically-acceptable salt of formula (I) ~~any of claims 1 to 10~~, which is for metabolic system diseases such as obesity, diabetes, hormone secretion disorder, hyperlipemia, gout, fatty liver; circulatory system diseases, for example, stenocardia, acute/congestive cardiac insufficiency, cardiac infarction, coronary arteriosclerosis, hypertension, nephropathy, sleep disorder and various diseases accompanied by

sleep disorder such as idiopathic hypersomnia, repetitive hypersomnia, true hypersomnia, narcolepsy, sleep periodic acromotion disorder, sleep apnea syndrome, circadian rhythm disorder, chronic fatigue syndrome, REM sleep disorder, senile insomnia, night worker sleep insantiation, idiopathic insomnia, repetitive insomnia, true insomnia, electrolyte metabolism disorder; and central and peripheral nervous system diseases such as bulimia, emotional disorder, melancholia, anxiety, epilepsy, delirium, dementia, shinzophrenia, attention deficit/hyperactivity disorder, memory disorder, Alzheimer's disease, Parkinson's disease, sleep disorder, recognition disorder, motion disorder, paresthesia, dysosmia, epilepsy, morphine resistance, narcotic dependency, alcoholic dependency (~~claim 12~~); or relates to a method for producing a compound of a general formula (I-1), which comprises reacting a compound of a general formula (Ia):

Please replace paragraph [0024] with the following amended paragraph:

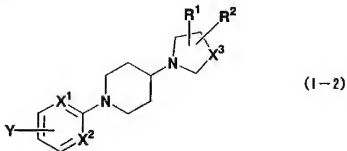
[0024]



[wherein X^1 , X^2 , X^3 , R^1 and R^2 have the same meanings as X^1 , X^2 , X^3 , R^1 and R^2 in formula (Ib); and Y is a group derived from Y^{1p} in formula (Ib) by removing or converting the protective group for the functional group of Y^{1p}] (~~claim 13~~); or relates to a method for producing a compound of a general formula (I-2), which comprises reacting a compound of a general formula (Ic):

Please replace paragraph [0028] with the following amended paragraph:

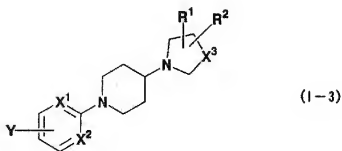
[0028]



[wherein X^1 , X^2 , X^3 , R^1 and R^2 have the same meanings as X^1 , X^2 , X^3 , R^1 and R^2 in formula (Ie); and Y is a group derived from Y^{1p} in formula (Ie) by removing or converting the protective group for the functional group of Y^{1p} (claim 14); or relates to a method for producing a compound of a general formula (I-3), which comprises reacting a compound of a general formula (If):

Please replace paragraph [0031] with the following amended paragraph:

[0031]



[wherein X^1 , X^2 , X^3 , R^1 and R^2 have the same meanings as X^1 , X^2 , X^3 , R^1 and R^2 in formula (Ig); and Y is a group derived from Y^{1p} in formula (Ig) by removing or converting the protective group for the functional group of Y^{1p} (claim 15).